Kentucky
Agricultural Experiment Station

University of Kentucky

ORGANIZATION AND MANAGEMENT OF THE FALLS CITIES COOPERATIVE MILK PRODUCERS' ASSOCIATION

BULLETIN NO. 390

Kentucky Agricultural Experiment Station in cooperation with the Division of Cooperation of the Farm Credit Administration

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Lexington, Ky.
January, 1939

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INTRODUCTION

The Louisville milk market has a metropolitan population of approximately 400,000 people. The market includes Louisville, Kentucky, New Albany and Jeffersonville, Indiana, and their contiguous outlying subdivisions.[1] Its industries include wholesale and retail distribution, hardware production, tobacco manufacture, flour milling, railroad shops, and distilleries.

Most of the market milk is produced on farms where regular inspections are made by health authorities. More than 60 percent of the inspected milk is sold by six of the largest distributors.[2] About 97 percent is pasteurized and sold by 30 distributors, while the other three percent is sold as raw milk by about 60 producers[3] who sell direct to consumers.

In Louisville less than two percent of the milk supply is sold by producer-distributors, as contrasted with over 40 percent in New Albany and Jeffersonville. Other differences of significance are (1) that milk sold to Indiana dealers does not necessarily meet the requirements of the city of Louisville and, therefore, some milk is not freely interchangeable between the cities in this market, and (2) that employment and industrial conditions differ in the Indiana and Kentucky sections of the sales area.

Diversified crop-and-livestock farming is characteristic of farm practice in the market supply area. Specialized dairies and vegetable

* Acknowledgement is made of the assistance of T. G. Stitts, Principal Agricultural Economist, Farm Credit Administration, in planning this study, and to W. C. Weldon, Agricultural Economist, Farm Credit Administration, for assisting in collecting and tabulating data. Invaluable assistance was also given by officials of the Falls Cities Milk Producers' Association, the Federal Milk Market Administrator, and members of the Milk Division of the Louisville Board of Health, in making their records available for this study. Producers and distributors, too numerous to mention, contributed wholeheartedly to make the study accurate and valuable.

1 Hereafter referred to as the Louisville market.

2 The terms distributor and dealer are used interchangeably in this study.

3 Hereafter referred to as producer-distributors.

crops occupy the area adjacent to the market and certain more remote localities with direct rail connections. A more extensive type of farming has been developed in the less favorably located parts of the supply area.

Practically all milk and cream that meet the requirements of the milk ordinances[1] are produced within a distance of 50 miles from the market. About 80 percent of the fluid milk[2] for the Louisville market comes from the counties of Shelby, Jefferson, Oldham, Spencer, Bullitt, Hardin, Henry, Nelson, Trimble, and Meade in Kentucky; the other 20 percent is produced in Clark, Washington, Floyd, Harrison, Scott and Jefferson counties in Indiana. These 16 counties constitute the Louisville milkshed.[3] The total milk production of these 16 counties was about 370 million pounds in 1934 according to the 1935 census of agriculture. During the same period over 116 million pounds were received by distributors in Louisville and of this amount 94 million pounds were graded. In addition to the Louisville milk distributors, there are also four cheese factories and 13 creameries that purchase milk and cream produced in the milkshed, but ordinarily they do not compete directly because of the higher cost of graded milk.

There are two milk producers' associations in the Louisville market. Both are bargaining organizations and together they control in excess of 90 percent of the graded milk in the market. The Falls Cities Cooperative Milk Producers' Association is the chief representative of producers in the market. In addition to selling milk for its members this Association performs such services as checking butterfat tests, supervising transportation, and purchasing farm supplies. The other association, known as the Independent Association, is chiefly a bargaining organization comprised of a relatively small number of milk producers. It negotiates with distributors for the sale of milk and performs other services only at the request of its members.

PURPOSE AND SCOPE

The purpose of this study is to describe the organization of the Falls Cities Cooperative Milk Producers' Association; to review the

1 Hereafter referred to as *graded* milk.

2 Fluid milk is a phrase used by the industry for milk produced under strict sanitary conditions and suitable for sale as bottled milk.

3 The area from which graded milk supplies are approved by the health regulations in the Louisville market.

experience of the Association and to point out the problems encountered by the Association in strengthening and perfecting the organization of the milk market. Consideration was given to the methods used and the effectiveness of these methods in solving specific problems in milk marketing.

METHODS OF GETTING INFORMATION

General information and statistical data were obtained from the records of the Falls Cities Cooperative Milk Producers' Association, the files of the Louisville Milk Market Administrator and the Milk Division of the City Health Department. Supplementary information regarding problems and policies, was obtained by personal interview with the management and from the files and proceedings of the Association.

Data from individual producers were gathered by personal interviews. Every section of the milkshed was covered, and the farms visited represented a cross-section of the market. Two hundred and eighty-one farmers, or about 20 percent of all shippers of graded milk, were interviewed. Twenty-five percent of these farmers were renters and 75 percent owners. Their milk was delivered on 56 trucks to 27 dealers. Producers were interviewed irrespective of their connection with cooperative marketing but only the answers of Falls Cities Association members are reported here. In addition to field schedules from producers, about two-thirds of the dealers in the market were interviewed for information which might be helpful in appraising the policies of the Association.

HISTORY OF THE ASSOCIATION

The Falls Cities Milk Producers' Association was organized under conditions of production and marketing that were not generally satisfactory to producers, distributors or consumers. The seasonal variations in supplies of milk were wide. The quality of milk was not dependable and often did not meet the requirements of the market. Prices paid for milk were not uniform and were considered discriminatory by many producers. Moreover, the plan of buying milk was not uniform thruout the supply area. Milk was sold by dairymen both by weight and by measure. Complaints of delay in the return of milk cans, slow payment for milk, frequent rejections of milk, and unsatisfactory weight and tests were common.

Altogether it appeared that the system of selling milk individually put most dairymen at a disadvantage in bargaining.

The Association had its inception in March, 1929, when a group of milk producers met to discuss the advisability of a cooperative milk marketing association for the Louisville area. At subsequent meetings the organization of a non-profit cooperative marketing association was perfected. When it became generally known that producers expected to organize a Cooperative Milk Marketing Association in the Louisville Market, most of the distributors were indifferent to the movement. In view of this attitude and because of their own past experience with cooperative marketing in the area, many producers adopted a waiting policy to see how the new association would succeed; consequently the membership campaign developed slowly and extended over the major part of two years. Financing the organization was hampered by this indifference of producers, consequently many leaders contributed their services so that available funds could be used where most needed. In addition to membership fees, funds were obtained by discounting notes of individual producers at local banks, by loans from the Indiana Farm Bureau and, in the latter part of the formative period, by a loan from the Federal Farm Board.

By September, 1930, 44 percent of the milk shippers were under contract but since this number appeared too small for effective bargaining, the Association continued to pledge producers. An aggressive membership campaign was immediately started when dealers reduced the price paid farmers for their milk in November, and 71 percent of the producers and about the same percentage of the milk supply for the market were under control to the Association by December. Within a year after the Association secured dealer recognition (March, 1931) its membership increased to include 91 percent of the milk shippers in the market. Thus the place of the Association in the market has been well established from the beginning. (See table 1.)

Altho the volume of milk handled by the Association has remained relatively constant since 1933, the percentage controlled by the Association has declined because of increased supplies outside the Association.

Furthermore, the place of the Association in the market was

affected to some degree by new agencies and conditions. Among the new forces were: (1) the revision of the Louisville milk ordinance and the enforcement of higher standards of quality for milk, and (2) the introduction of a Federal Milk License in June, 1934. These forces have had more than passing effect and their influence has extended over all or part of the period studied.

Table 1. Volume of graded milk in the Louisville market.

Calendar year	Total	Association	Association
	Pounds	Pounds	Percent
1932[1]	106,268,385	95,841,790[2]	90.2
1933	96,967,874	82,958,390[2]	85.6
1934	94,108,744	80,816,572	85.8
1935	98,076,264	81,237,838	82.8
1936	103,050,721	81,936,164	79.5
1937	101,347,256	81,194,850	80.1

1 The system of graded milk was not in full force during the first part of the year and consequently some ungraded milk is included in the totals.

2 Some milk that did not belong to the Association was included in the pool reports for 1932 and 1933. Therefore, a flat reduction of 5 percent was made in the volume reported by the pool in 1932, 1933, and the first five months of 1934.

PLAN OF ORGANIZATION

The Falls Cities Cooperative Milk Producers' Association was incorporated in Kentucky under the Bingham Cooperative Marketing Act on November 25, 1930. The Association is a non-stock, non-profit organization whose primary purpose is to bargain for the sale of milk and dairy products for its members. However, the articles of incorporation provide that the Association may purchase, process and distribute milk and dairy products and engage in other activities for the benefit of its members. In spite of these broad powers the Association has confined its activities to membership service, collective bargaining for milk prices and to such other activities as would lend strength to market stability.

Any producer of dairy products in the Louisville territory was eligible to membership upon paying the three-dollar membership fee and signing a standard marketing agreement. The cost of operating and maintaining the Association was defrayed by a deduction of not to exceed five cents per hundred pounds of milk or milk equivalent handled for the producer. An additional deduction not to exceed three cents per hundredweight was allowed for the purpose of building up Association reserves. The original purpose of

the Falls Cities Association was to act as bargaining agent for all milk producers in the area, but with the passage of the milk ordinance the activities of the Association were confined to the marketing of milk and there was a gradual withdrawal of cream shippers from active participation in the Association's affairs.

HEALTH REGULATIONS

The Louisville milk ordinance has had a far reaching effect in the market, since many changes in equipment and methods of producing milk followed the promulgation of these regulations.[1] Between 80 and 90 percent of the producers who continued to sell fluid milk in the Louisville market made some improvements in their dairy barns and about the same percentage either constructed or remodeled their milk houses during the compliance period ending in November, 1932.

Table 2. Number of dairy farms on which changes in equipment were made.[1]

Changes	1931[2]	1932	1933	1934	1935	1936	1937	Grand total
New barns	13	80	5					98
Barns remodeled	93	984	1					1,078
New milk house	30	871	13					914
Milk house remodeled	43	346						389
Sanitary toilets			240	10	58	173	121	602
Mechanical refrigeration					40	46	102	188[3]
Water supplies							62	62

1 From the records of the Louisville Health Department. 2 Last three months. 3 It is noteworthy that by July, 1938, the number of mechanical refrigerations had increased to 353 units.

Among the notable changes since the ordinance became fully effective in November, 1932, are (1) installation of sanitary toilets, (2) improved water systems and (3) installation of mechanical refrigeration. Most of these changes were made voluntarily but others were made necessary by obsolescence and existing standards of quality.

Some dairymen in the area were producing graded milk prior to the passage of the revised Louisville milk ordinance in 1931,

1 The milk ordinance passed in Louisville in 1931 was enforceable only for milk sold in Louisville. Early in 1932 a voluntary plan of inspection for dairies serving Indiana distributors was agreed to and, in June, 1936, the Indiana Milk Control Board established uniform conditions of sale for all Indiana cities. However, it is noteworthy that there still appears to be some differences in inspection services that tend to prevent a free interchange of milk between all sections of the market.

but the majority of producers had to make substantial improvements before qualifying as shippers of graded milk. Only five out of the 266 producers interviewed reported no changes in equipment and no cash costs, while 26 reported building and equipment costing more than $1,000 (table 3).

Table 3. Initial cost of meeting requirements of the Louisville milk ordinance.

Cost	Number of farms	Percent of farms
Dollars		
0- 99.9	24	9.0
100-199.9	50	18.8
200-299.9	57	21.4
300-399.9	44	16.5
400-499.9	19	7.1
500-599.9	23	8.6
600-699.9	14	5.3
700-799.9	6	2.3
800-899.9	2	.8
900-999.9	1	.4
1000 and over	26	9.8
Total	266	100.0

The average cost for the producers interviewed was $416. This cost represents cash expenditures up to the end of the compliance period, November, 1932, and does not include expenditures since that time. Unquestionably, on many farms, the total investment resulting directly and indirectly from the milk ordinance has increased materially since 1932.

Farmers were paid premiums for graded milk in 1931 and 1932 but the cost of meeting the health requirements together with the extremely low prices received for milk during the subsequent period, discouraged many producers and they turned to other outlets. The initial cost of meeting the requirements of graded milk and the higher cost of producing it since 1932 have tended to limit the number of new producers of graded milk and have been a factor in increasing the number of cows per dairy herd.[1] Nevertheless, the average size of herd for all producers interviewed was less than

1 It is interesting to note that 251 out of 272 producers interviewed were in favor of the milk ordinance. A considerable number of farmers said that they had originally opposed the milk ordinance but that its benefits had outweighed their original objections. Furthermore, most of those who said they did not favor the ordinance indicated that their objections were not to the principles of inspection, but rather to what they termed arbitrary enforcement of non-essential provisions.

19 cows and sixty-nine percent of the herds contained less than 20 cows (table 4).

The effect of the Louisville milk ordinance on the market has been (1) to encourage the production of a uniformly higher quality milk, (2) to increase consumer confidence in milk because of a superior product, (3) to reduce the competition between graded and ungraded supplies by limiting the use of ungraded milk, (4) to increase the cost of production for dairies meeting the requirements of graded milk, and (5) to stabilize milk production.

Table 4. Size of herds in the Louisville market, producing graded milk, in 1937.

Number of Cows	Number of herds	Percent of herds
1- 5	3	1.3
6-10	55	24.3
11-15	47	20.7
16-20	52	22.9
21-25	28	12.3
26-30	15	6.6
31-35	8	3.5
36-40	7	3.1
41 or more	12	5.3
Total	227	100.0

MARKET PRICE STRUCTURE

PLAN OF SELLING

Sales agreement. The primary purpose of the Association was to negotiate the price, conditions and terms of sale of milk for members. Under the sales plan adopted, the Association agreed to supply milk to dealers and to establish classifications and prices for milk in a joint conference. In November, 1935, the Association and the dealers buying from it signed a self-renewing contract guaranteeing that dealers would purchase all Class I and Class II milk from the Association. It further provided that differences would be submitted to disinterested parties for arbitration whenever the parties could not agree on prices or classifications.

Classified price plan. For the first two months the Association operated, no dues were collected and no dealer audits made. The Association accepted the then prevailing plan of the market to sell 70 percent of milk at a base price and 30 percent at a lower surplus price. The blended or average price was returned to producers.

Subsequently a "classified price" or "use plan" of selling was adopted. This plan provided that each distributor would report to the Association the amount of milk sold for different uses, and that they would pay for milk according to its use.[1]

For the most part, milk sold by distributors in bottles and bulk to consumers and restaurants was designated as Class I and sold for the highest price. Milk sold to consumers and restaurants as sweet cream and cream used in buttermilk and cottage cheese was designated as Class II and sold for somewhat less than Class I but higher than that for other uses. Other classifications were established to take care of milk sold for ice cream, condensing, butter production and other manufacturing purposes. This milk was commonly designated as Class III and sold at a price well below that received for Class I and Class II.

The classification of milk used for various purposes was changed from time to time (table 5) in the effort of the Association to adjust price differences with dealers, to stabilize the market, and to obtain the highest return for producers. This policy caused some uncertainty among dealers and misunderstanding of the basis of sale among producers but it has the advantage of flexibility and adaptability which permits adjustments to meet changing conditions in the market.

The Association Pool. Since its inception, the Association has maintained a pool in which all members receive the same price for milk of the same grade and butterfat content regardless of the dealer to whom milk is sold.[2] A firm of certified public accountants is employed to verify the monthly reports on use sent to the Association, to figure the Association pool, and to calculate the price paid producers. When the pool is computed each dealer pays the producers whose milk he has received and is credited with such payments in an equalization account. Then, in turn, the dealer is charged for the use of milk received according to a schedule of prices previously determined by the Association and dealers.

1 It should be stressed that the "classified price" or "use plan" is a method of selling milk to distributors and is not a method of returning to producers the proceeds of the sale of milk. For details of procedure see The Falls Cities Cooperative Dairyman, August 17, 1932.

2 A weighted average price is calculated on the use by all distributors rather than on the basis of the utilization by individual distributors. For details of operation of the pool, see Falls Cities Cooperative Dairyman, Vol. III, No. 4, May, 1934, and Vol. III, No. 5, June, 1934.

Table 5. Use classifications of milk in Louisville, May, 1931—January, 1938.

How used	Class in which it was sold to dealers									
	May 1, '31, to May 1, '32	Apr. 1, '32, to May 30, '32	June 1, '32, to Feb. 28, '33	Mar. 1, '33, to May 30, '33	June 1, '33, to Oct. 31, '33	Nov. 1 '33, to May 30, '34	June 1, '34, to Dec. 31, '35	Jan. 1, '36, to June 23, '36	June 24, '36, to July 31, '37	Aug. 1, '37, to
	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class
Bottles and bulk to consumers	I	I	I	I	I	I	I	I	I	I
Bottles and bulk to restaurants	I	I	I	I	I	I	I	Ia	I	I
Pints and ½ pints to restaurants	—	—	—	—	—	—	—	—	—	Ia
Butterfat in flavored milk to consumers	I	I	I	I	I	I	II	II	II	II
Butterfat in flavored milk to restaurants	I	I	I	I	I	I	II	II	II	II
Sweet cream, bottles and bulk to consumers	II	IIa	I	IIa	IIa	IIa	II	II	II	II
Sweet cream, bottles and bulk to restaurants	II	IIa	I	IIa	IIa	IIa	II	IIa	II	II
Cream used in buttermilk to consumers	II	IIa	I	IIa	IIa	IIa	II	II	II	II
Cream used in buttermilk to restaurants	II	IIa	I	IIa	IIa	IIa	II	IIa	II	II
Cream used in cottage cheese to consumers	II	IIa	I	IIa	IIa	IIa	II	II	II	II
Cream used in cottage cheese to restaurants	II	IIa	I	IIa	IIa	IIa	II	IIa	II	II
Ice cream mix	II	IIb	II	IIb	IIb	IIb	III	III	III	III
Starter mix	II	IIa	II	IIb	IIb	IIb	III	III	III	III
Butter production	III	III	III	III	IIIb	IIIb	III	III	III	III
Condensery production	III	III	III	III	IIIb	IIIb	III	III	III	III
Evaporated production	III	III	III	III	IIIb	IIIb	III	III	III	III
Hard cheese production	III	III	III	III	IIIb	IIIb	III	III	III	III
Class I and II returns (12%..	—	—	—	—	IIIa	IIIa	—	—	—	—
Milk for charity	—	—	—	—		IIIc	Charity	Charity	Charity	Charity

Thus, by balancing the credits against the debits the extent to which each dealer pays into or draws out of the equalization fund is determined.

Payment to Producers. Each producer is paid by the dealer receiving his milk. Beginning in November, 1934, producers received a flat price equal to the weighted average of Classes I, II, and III milk, whereas prior to this date they generally received one price on base milk and another price on surplus milk. Prices were quoted on milk testing 4 percent butterfat and subject to butterfat differentials for milk testing above or below this figure. In May, 1931, producers received a flat premium or discount of 3 cents for each 1/10 percent their milk tested above or below 4 percent. Later, the differential varied between two and four cents as established by a schedule based on a range of butter prices, and finally, in August, 1935, a differential of 1/10 of the daily average wholesale price of 92 score butter at Chicago was established. Premiums are received by most producers from September to April and discounts are taken from May thru August.

Price Objectives. A sales contract provides that both the Association and dealers will strive to sell the maximum amount of Class I and Class II milk that will return to producers in the country the maximum price for all milk. The chief bargaining function of the Association, then, is to get as high a price as conditions of production and consumption warrant and to get as many cents of the consumers' dollar as is consistent with good business practice.

The basic facts on changes in production and consumption are available to the Association from reports on receipts and sales of milk.[1] With this information at hand the major problem of the management is to establish economically sound price structures.

PRICES OF MARKET MILK

There have been significant changes in the prices received by farmers for milk since the Association began to function in 1931. The trend of prices has been upward; variations in prices have become less pronounced; and the spread between prices of Class I milk and milk used for manufacture has increased. (See figure 1.)

These changes may have been due to one or more of several fac-

1 Each month the Association receives a report of the use made of milk for each of the dealers buying milk from Association members.

tors including a generally improved demand for milk, generally rising prices of farm products including feed grains that enter into the cost of production; by improved quality of milk and higher costs incurred thru the enforcement of higher standards of grading; and finally, by the stronger bargaining position of milk producers because of the existence of the Association. Other factors of a more

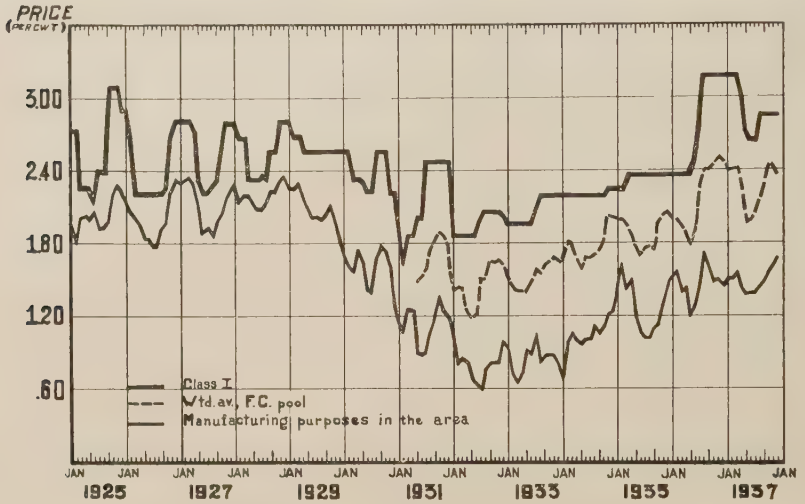

FIGURE 1. Louisville prices of graded milk.

temporary and passing effect on prices were a great drouth in 1936 and an unprecedented flood in 1937. The information at hand does not indicate the relative importance of the various factors affecting the level of milk prices and changes in price relationship during the life of the Association. A premium was paid for market milk during the six years before the Association began to function, but the amount of premium over milk used for manufacture has increased since then (table 6).

Perhaps the premium may not have increased as much as the evidence in figure 1 would indicate since the basis of paying for milk was radically changed by the Association and proper adjustment for this change could not be made in presenting prices for the period.[1] It is not probable, however, that the increase in premium

1 Because of the variation in buying plans the milk price prior to June, 1931, was not exactly comparable to either the Class I price or the average price paid producers in the market since then. The exactly comparable figure should be somewhere between the two.

can be explained wholly by the changes in buying plans. It is reasonable to believe that the changed bargaining position of dairymen was an important element in the larger premium. This point of view is further substantiated by the greater rise in price of market milk in Louisville than in other parts of the United States from 1932 to 1937. (See figure 2.)

Table 6. The amount by which the price of graded milk[1] exceeded the price paid for manufacturing purposes in the market area[2] 1925-1937.

Year	Cents per cwt.	Year	Cents per cwt.
1925	52	1931	63
1926	41	1932	62
1927	42	1933	69
1928	36	1934	74
1929	50	1935	60
1930	78	1936	70
		1937	78

1 Milk prices equal the Louisville Class I price (shown in table 1) prior to May, 1931, and the average Falls Cities pool price after May, 1931.

2 Butterfat and condensery prices were converted to equivalent prices of 4 percent milk and a manufacturing price calculated as follows:

1. 70 *percent of*: Kentucky Farm Price of butterfat on the 15th of the month X 4, plus 20 percent for skim milk.
2. 15 *percent of*: Indiana Farm Prices of butterfat on the 15th of the month X 4, plus 20 percent for skim milk.
3. 15 *percent of*: Price of 3.5 percent milk at condenseries in the East North Central States plus ½ of the price of 92-score butter at Chicago.

Whereas the rate of rise in the prices of fluid milk was .0146 cents per month in the United States as a whole it was nearly twice as great, or .0258 cents, for Louisville. Milk sold in Louisville must be approved by health authorities and milk from outside the milk-

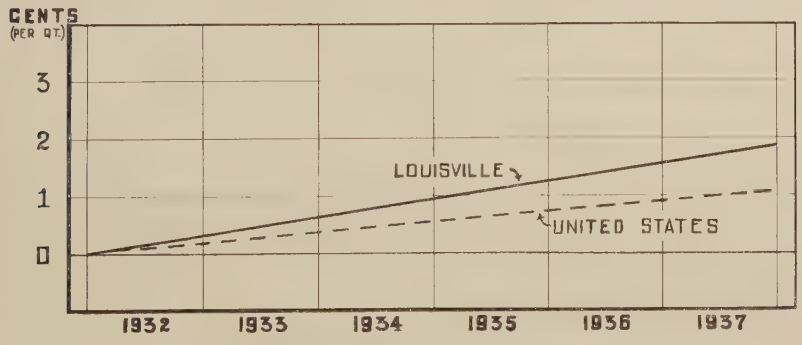

FIGURE 2. Change in the price paid producers in the Louisville market and in the United States, 1932 to 1937. (Monthly increment expressed in cents per quart.) Solid line = price received by association members 4% milk. Broken lines = price received by fluid milk producers in the United States. U.S.D.A. Dairy Situation. 4% milk.

shed has not been approved except in emergencies. Generally speaking, then, the market has been almost entirely free of outside competition, and the enforcement of quality standards within the milkshed has tended to limit the total supply of graded milk. These favorable factors have been reflected in the prices paid producers in the milkshed.

PRICE POLICY

In order to study the effect of Association policies on price all milk has been classified according to its use, irrespective of the classification designated by the Association, and thus the relation of price to use rather than the relation of price to class name has been shown. This method is made necessary by the frequent reclassification of milk for different uses.

Altho prices of all classes of milk were established by bargaining of representatives of dairymen and distributors, the considerations in arriving at prices for the various classes have peculiar importance.

Graded Milk and Flavored Milk (Class I).[1] The price was determined chiefly from records of milk production and consumption, hence purchasing power of consumers and cost of production indirectly determined the relative level of price for Class I milk.

A distinguishing feature of prices was the policy of the Association to change classifications to meet new market conditions in an effort to compromise differences between various sections of the market and between different types of distributors. New classes at new prices are thus established to care for temporary or permanent conditions that call for price adjustments. This policy has caused uncertainty of prices by making the price plan more complex but it has had the advantage of permitting price changes and concessions without disturbing the whole price structure. Prior to June, 1934, such price adjustments were looked upon as temporary and consequently handled thru the Association pool without special classifications. With the frequent recurrence of need for adjustment the Association then adopted a policy of handling the prob-

1 The volume of flavored milk was small and has little effect on Class I prices. Since June, 1934, distributors have paid only for the butterfat used in flavored milk at Class II prices. Part of the time prior to June, 1934, flavored milk was sold at Class I prices.

lem thru more definite and comprehensive classifications. Figure 3 shows the price range and number of separate classifications which were established.

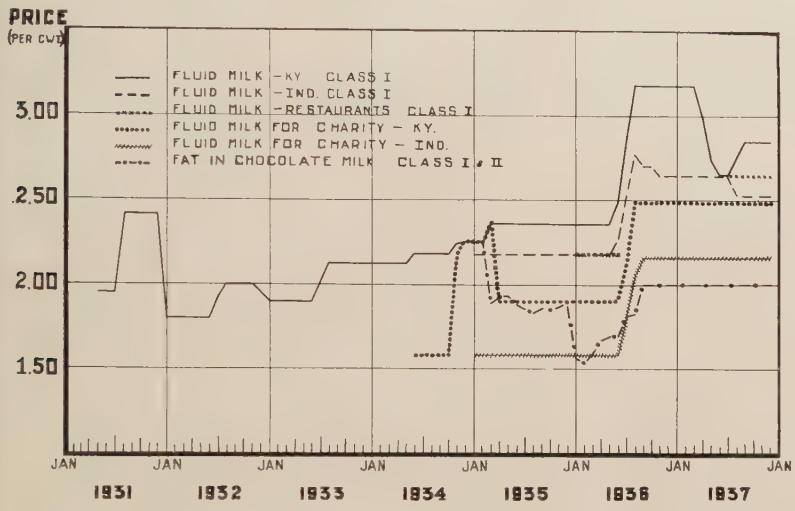

FIGURE 3. Classification and prices established for fluid use.

The most important adjustments were for milk sold to dealers in Indiana. Since resale prices in the Indiana cities were generally lower than those in Louisville, the Association lowered the price to dealers in order to compensate for unfavorable industrial conditions and in order to serve dealers better where there was considerable competition from producers who sold direct to consumers. Similarly, lower prices were made to dealers for milk sold to charitable organizations. This was done in order that fresh milk might be made available to those least able to buy it at a price well below the price generally quoted on retail milk.

Approximately ten percent of the graded milk for the market was thus affected by lower price schedules, but the net effect on the price was small. When the value of all milk sold for fluid use was found and an average price computed, the difference between the highest price and the average price for all uses ranged from zero to eight cents per hundredweight (table 7).

The average and highest price of Class I varied from month to month depending upon the volume of milk sold in each classifica-

tion, but the difference never exceeded three percent. Thus, the Association was better able to maintain its prices, effect market harmony and forestall difficulties growing out of fundamental prob lems facing dealers in various sections of the market.

Table 7. The amount by which the highest Class I price exceeded the average price for all Class I milk, per 100 pounds.

Month	1934	1935	1936	1937
	cents	cents	cents	cents
January	-	1	6	7
February	-	1	6	6
March	-	3	6	8
April	-	4	6	5
May	-	4	6	3
June	2	4	4	2
July	2	4	5	2
August	2	4	8	5
September	3	4	8	8
October	3	4	7	7
November	1	4	8	7
December	-	4	7	7

Cream, and Cream Used In Buttermilk and Cottage Cheese. (Class II) The price policy with regard to cream has been changed from time to time and has varied with the conditions in the market. As a result prices were generally below those of Class I, but in July, 1932, the Association sold cream, cream used in buttermilk and cottage cheese at the same price as Class I. Again for a short time, beginning in November, 1934, the Association was able to get the same price for whole milk and cream (figure 4). It is significant, that during the period when cream sold at the price of Class I milk, in 1932, sales of cream dropped from 12 to 8 million pounds. Since then price changes have been less extreme and the yearly volume has remained relatively constant. The changes in the classification of milk used for cream have been relatively unimportant, and the net effects of lower prices amounted to less than 6/10 percent.

Surplus Milk, Ice-Cream Mix, Starter Milk, Evaporated Milk, Butter Production, etc. (Class III) The prices of surplus milk in Louisville have been established either by a formula based on Chicago butter prices or by competitive bids based on prices paid for milk evaporation. Thus prices of surplus milk have direct-

ly or indirectly reflected butter prices and competitive conditions. For the period prior to the Federal License adopted in June, 1934, numerous changes were made in the classification of surplus in an effort to get the highest possible net price. Since

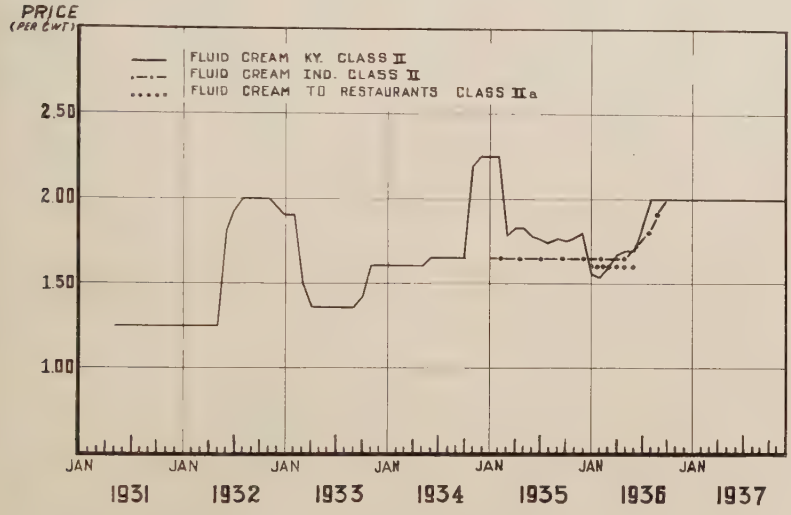

FIGURE 4. Classification and prices established for milk used for cream. (Class II).

then no change has been made in the general classification but part of the time dealers in the Indiana cities have paid somewhat less than was paid in Louisville (figure 5).[1]

Most of the time during the period from 1932 to 1937 the average price paid by distributors in Louisville for Class III milk was higher than the average price that would have been received by the majority of farmers who sold milk and cream locally in the milkshed (figure 6).

However, the premium paid generally was not very large and it appears that many producers, especially those in favorable locations, could have sold surplus milk locally to advantage. Nevertheless, the difficulty of getting satisfactory outlets for small quantities of milk and the inconvenience in handling it seem to have encouraged the shipment of all milk to Louisville even tho it was not required for the milk trade.

1 At certain times some concessions on Class III prices were made to Indiana dealers in lieu of changes in Class I price schedules.

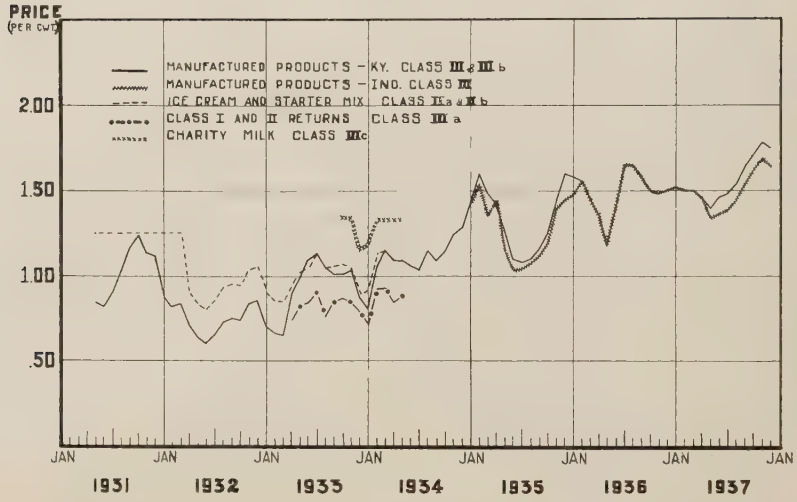

FIGURE 5. Classification and prices established for surplus (Class III) milk.

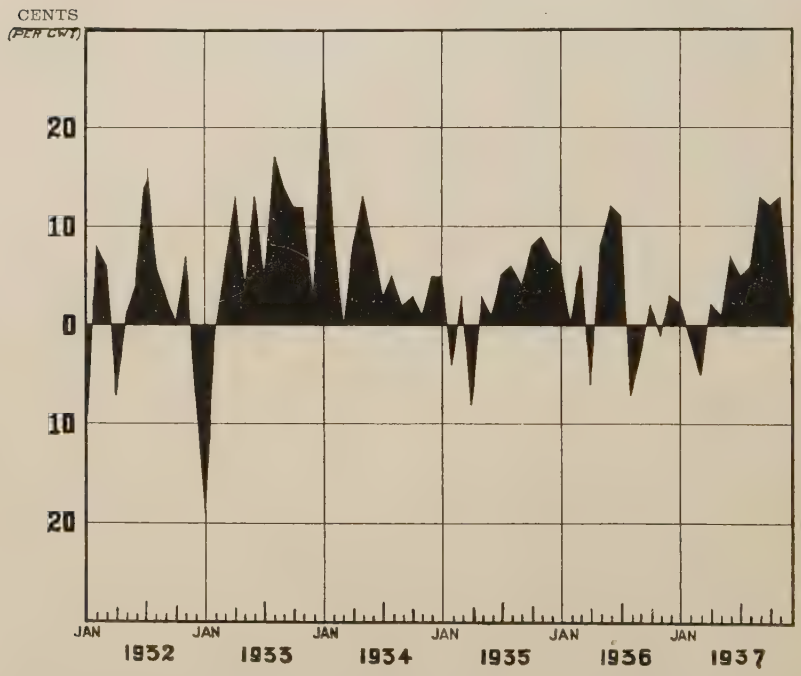

FIGURE 6. Amount by which the average price for Class III milk was above or below the estimated manufacturing price. See footnote, table 6, for method of estimating the manufacturing price.

Moreover, the comparison shows that the average surplus price was less than the price paid by evaporating plants for ungraded milk during most of the period from September, 1932, to February, 1936.[1]

The relative position of surplus, or Class III, milk improved as time passed and finally, in 1937, the surplus graded milk sold at a premium over ungraded supplies. These improved prices were partly due to a change in use and partly to more effective bargain-

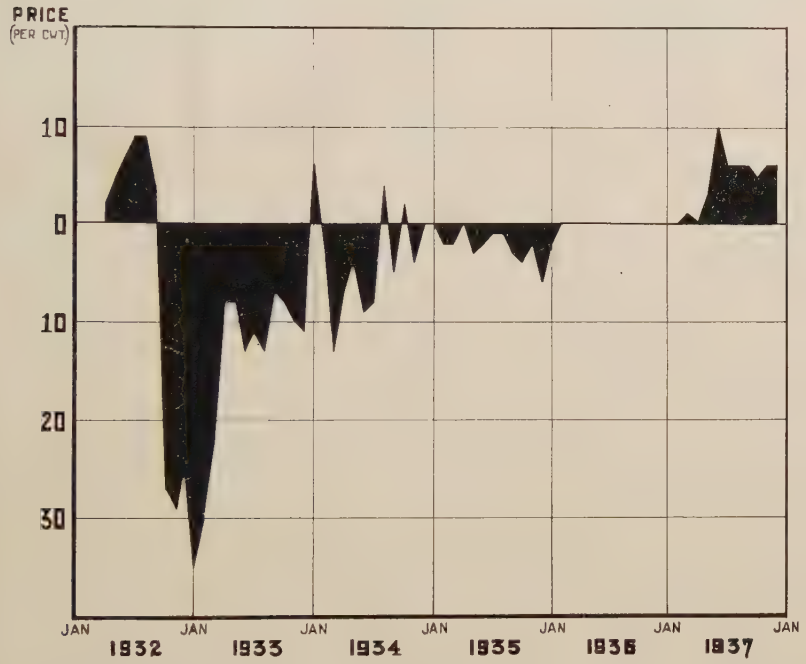

FIGURE 7. The amount the average surplus price was above or below the price paid by evaporating plants for ungraded milk, in Louisville.

ing. For instance, prior to April, 1933, each dealer handled all surplus coming to his plant and often made it into butter or sold it as sour cream. The Association soon recognized that the sale of surplus for butter manufacture did not represent the highest use value; consequently, in April, 1933, all surplus milk was offered to

1 The ungraded price was the price paid in Louisville for milk used for evaporated products, while the price of graded surplus represents the value of milk used by dealers for butter production, cheese production, ice-cream mix and other manufactures.

the highest bidder. The bid price then established the price for all surplus milk and each dealer could retain his surplus at the bid price or transfer it to a designated purchaser. As a result of the new selling plan many smaller plants and some larger ones transferred surplus to plants with evaporating facilities. This plan definitely increased the value of surplus milk but failed to bring prices in line with ungraded supplies until some months after the Federal milk license was established. Continued efforts to sell surpluses of graded milk advantageously led to uniform prices in February, 1936, and finally to premiums for graded surplus in February, 1937. (See figure 7.)

OTHER PHASES OF THE PRICE PROBLEM

Stability of Prices. Acting on the philosophy that farmers ultimately pay for all resale price cutting, the association has endeavored to maintain a stable price structure for milk. Consequently attempts of dealers to sell below prevailing resale prices have met with disfavor.

In July, 1932, a dealer buying from this Association announced a plan for reducing the wholesale price of milk. While no mention was made of reduced prices to producers, the Association felt that such a plan would demoralize the market and demanded higher prices until a satisfactory resale plan was arranged among dealers. Likewise, in the summer of 1933, another dealer introduced a new sales plan by which customers of certain chain stores could get milk for eight cents per quart when the most common price was nine cents. Again the Association insisted that lower prices would disrupt the market and took steps to discourage the plan. A third occasion when the Association became interested in the resale price was in February, 1935. At this time the introduction of milk at a special price resulted in retaliation among other dealers and a general price war. In spite of the attendant low resale prices the Association maintained its price for Class I milk and the war was short-lived.

As a result of such difficulties and in order to avoid future demoralization of prices, a committee was organized under the

auspices of the Federal Milk Market Administrator to deal with all future problems of resale prices. This organization was known as the "Milk Industry Board" and consisted of three representatives appointed by distributors, three appointed by the producers' organization and one representative of consumers in Louisville. Producers and distributors handling 98 percent of the total graded milk supply had agreed to abide by the decision of the Committee.

Shortly after the formation of the Milk Industry Board, a controversy developed between distributors over discounts allowed chain stores and some few independent grocery stores. The committee was subsequently disbanded when it proved powerless to cope with the problem. Following the break down of the Milk Industry Board the market became badly honeycombed with discounts. In order to prevent the loss of Class I sales the Association stood one half of certain discounts for a short time, but when it became evident that discounts would be continued indefinitely a special classification was set up and distributors were made responsible for any and all such discounts. These special classifications continued until June, 1936, when an agreement concerning these discounts was reached.

Thus the activities of the Association in stabilizing prices have been designed chiefly to meet emergencies where producers' interests were at stake. Moreover, interference with the resale prices was generally undertaken only when there was the prospect of cutthroat competition and a consequent demoralization of the retail price structure. However, recognizing the possibilities of disorganization of the market by antagonisms created among dealers if an aggressive policy of interference was pursued, and also recognizing the difficulties of a too rigid resale price which fails to recognize differences in costs of distribution and other economic factors affecting resale prices, the Association later wisely adopted a less aggressive attitude which tended to place the responsibility for resale prices entirely on distributors and thus further encouraged dealers to work out their own problems of distribution.

Dealer Spreads. During the period studied both the buying and selling price of Class I milk advanced, but the rate of increase in prices received by producers was faster than the rate of increases in prices paid by consumers (figure 8). It follows, then, that

producers not only received a larger proportion of the retail price of Class I milk but they also received a larger proportion at the close of the 1932-37 period than at the beginning. This change in the relationship of wholesale to retail prices can normally be expected in a period of rising prices such as that of 1932-37, when wholesale prices tend to rise more rapidly than retail prices. But in this instance there is evidence that the spread between buying and selling prices decreased not only relatively but also absolutely.

An analysis of available records of representative dealers indicates an average spread of 5.85 cents per quart in 1930 and 1931 on all milk sold in Class I. In 1936 and 1937 the average was 5.09 cents, or 13 percent less. Likewise in 1930 and 1931 a spread of 7 cents per quart on retailed bottled milk was reported as contrasted with 5.8 cents, or 17 percent less, in 1936 and 1937. Thus the actual amount of spread between producers and consumers has been reduced since the Association was organized.

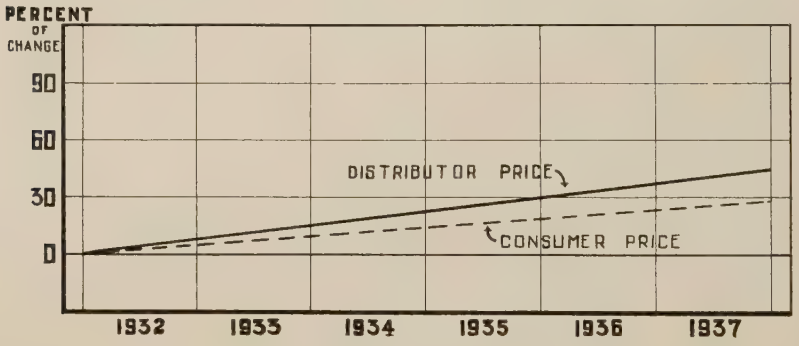

FIGURE 8. Change in the price paid by distributors and by consumers for Class I milk. (Monthly increment expressed in percent of the average.)

Undoubtedly, part of these narrower spreads were due to lower operating costs and in some instances to savings made possible when the Association took over certain services formerly rendered by dealers. For instance, the Association has done the testing for butterfat for certain dealers and it has guaranteed an adequate supply of Class I and Class II milk to all dealers. Futhermore, the policy of the Association to get and maintain higher prices for producers probably increased efficiency in distribution. It is also possible that dealers were able to raise their wholesale margins,

lower retail margins and thus return to farmers a larger proportion of what consumers paid for milk because of more stable competitive conditions in the market.

From information at hand it appears that retail margins since 1932 compare favorably with those reported for other markets in the same section of the country.[1]

Selling Plans. Two plans of selling milk have persisted in Louisville. Dealers supplied by the Association bought milk on the classified plan while dealers buying from non-association members paid a flat price for all milk purchased. The presence of the two plans in the market has brought about serious management problems. First, producers have been encouraged to withdraw from the Association by certain dealers who offered to pay more than was paid to Association members, and second, distributors with a high Class I and Class II usage have complained that their costs were too high as compared with those of similar types of dealers who purchased at a flat price. Futhermore, producers who became dissatisfied with the policies of the Association found an outlet for milk among distributors whose cost of Class I and Class II milk could be lowered by flat-price buying and among distributors who became dissatisfied with policies of the Association.

Producers who sold at a flat price received few if any regular services and were paid only one or two cents more per hundred than was received by Association members and therefore some dealers may have enjoyed lower costs for milk. Realizing that an equitable distribution of surplus over the entire market would equalize milk costs to all dealers, the Association did not attempt to sign up any considerable number of shippers beyond that required to maintain a stable membership. This policy was adopted in the hope that dealers buying outside the Association would carry their equitable share of the market surplus. The result has not been altogether what was hoped for, since instead of carrying the surplus other dealers with a high Class I usage purchased milk outside the Association as it became available. Since the attempts to equalize surplus have not been entirely successful, the association has given

1 Welden, Wm. C. and Stitts, T. G., Milk cooperatives in four Ohio markets, Farm Credit Administration Bulletin, No. 16, showed dealers' spreads for the period from 1930 to 1935 ranging from 4.98 cents to 6.91 cents per quart. Roberts, John B. and Price, H. B., in Kentucky Bulletin 377, The Lexington Milk Market, showed yearly average spreads ranging from 5.1 cents to 6.1 cents per quart during the period from 1932 to 1936.

some attention to spreads between the Class I price and the average price for all milk, but spreads have not been reduced sufficiently to discourage the purchase of milk at a flat price. Furthermore, these adjustments could not be made accurately since there was no way to know the cost of all milk bought at a flat price compared with the cost of milk bought on the classified plan. Figure 9 shows that the spread between the price of Class I milk and the price received by Association members averaged close to 50 cents per hundred prior to May of 1935, and that since then the spread has been as high as 78 cents per hundred pounds. For sixteen straight months

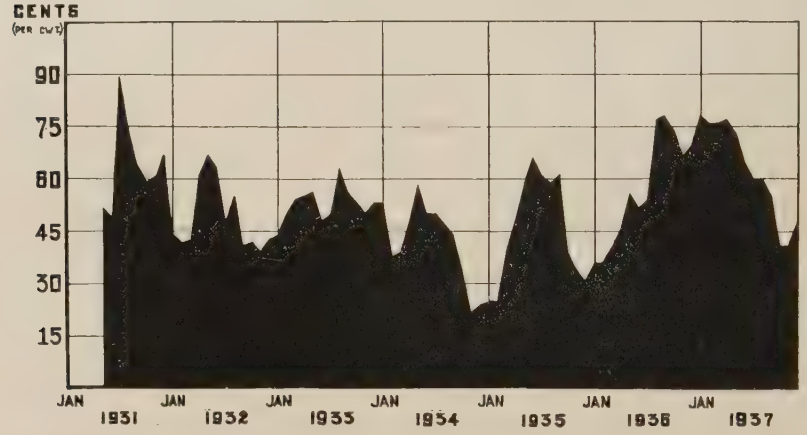

FIGURE 9. Spread between the price of Class I milk and the average received by Association members.

prior to September, 1937, the spread was never below 49 cents and much of the time it was wider. This generally widening spread resulted in considerable dissatisfaction among certain dealers buying under the classified plan and raises the question of whether the price spread between Class I milk and the average price for all milk had not become too wide, particularly during the last half of 1936 and 1937.

In the past it has been impossible for any larger dealer to get adequate supplies of graded milk outside the Association, but several small dealers have left the Association to purchase milk at a flat price. The gradual increase in the volume of milk sold out-

side the Association (see table 1) is evidence that the problem arising from the two buying plans still persists. However, the Association seems to have adopted a new approach to the problem. For example, there has been an increase in the number of new graded-milk shippers since January, 1938, and the Association has acquired most of them as members. Furthermore, in April, 1938, the Association provisionally agreed to sell milk by group classifications and to establish price by the use of a formula instead of by the direct bargaining method previously used. Unquestionably these changes in membership and price policy will be accompanied by new management problems not yet apparent, nevertheless they were attempts to adjust policies to changing market conditions.

Dealers' Attitude. Comments of dealers with regard to the activities of the Association in the market are perhaps the best indicators of their attitude toward price policies. These attitudes, whether right or wrong, are important to the Association because they formulate a basis for dealer action. The majority of dealers interviewed indicated that dairymen and the market generally had benefited from collective bargaining by producers, but that not all dealers had shared equally in the advantages of collective bargaining.

Some dealers expressed the feeling that the classified plan worked a hardship on dealers having a large trade in Class I milk since it was they who had to compete most directly with dealers who purchased milk at a flat price. Others felt that the Association had forced prices too high and that interference in resale prices and price competition was unjustified because it prevented the free play of supply and demand factors and gave protection to inefficient milk distributors. Still others were rather critical of the Association sales policy and felt that it was arbitrary and unsympathetic toward the dealer's problems. They felt that the price system did not adequately take into account changes in the cost either of production or of distribution of milk. Furthermore, it failed to recognize the fundamental difference between the dealer's business with a relatively fixed cost and that of producers where costs were more variable.

Some distributors stated that the arbitrary system of establishing the price of Class I milk had resulted in "trading" on the other

classifications.[1] Certain dealers thought that trading was not always fair and equitable, particularly to those who could not profitably utilize surplus. Furthermore, some dealers felt that the whole pricing system was faulty, and argued that the conferences required altogether too much time, permitted personal differences to influence judgments, caused unnecessary changes in classification of milk and in other ways made it difficult to establish adequate price plans.

Nevertheless the Association and the dealers have worked out most of their differences in conference, but on five occasions arbitration was used. One of these arbitrations involved technical matters regarding the method of reporting sales and the other four involved price differences. Two of the arbitrations lowered and two of them raised the price of milk to producers. None of them were entirely satisfactory to all parties concerned because of the fundamental differences in type of dealers and their problems.

In spite of differences some of the most critical distributors were generous in their praise of the Association, and all of them tried to be fair in presenting both sides of the question. It was the concensus of dealers that the Association had been largely responsible for a more stable market, a more harmonious relationship between dealers, a more uniform buying plan, more accurate tests and a better satisfied group of producers. They also stated that the Association had encouraged a uniformly high quality of milk, encouraged adjustments in production and facilitated a better movement of supplies during the season of shortage and during emergencies due to drouth and flood. Furthermore, they indicated that the officers and management of the Association were becoming better acquainted with some of the problems facing distributors. However, they stressed the need of better understanding and a more sympathetic attitude of farmers toward price problems, and pointed out that differences which had been arbitrated could not be permanently solved until there was mutual understanding of the economic forces affecting supply and demand for milk.

Producers' Attitude. More than 80 percent of the members interviewed believed their Association had given them a voice in establishing milk prices at higher levels. Just how much of the in-

1 Getting the desired Class I price by under-pricing excess or surplus milk.

crease in prices was due to collective bargaining and how much to other forces was not known, but the fact that the price paid to milk producers in the Louisville milkshed advanced faster than that for the country as a whole is an indication of the effectiveness of the bargaining activities of the Association.

Altho reports of most of the actual bargaining procedures of the Association have been recorded in the Association paper "The Falls Cities Cooperative Dairyman," and the management has tried to keep its membership informed, very few of the producers knew how their milk was sold. For the most part producers showed very little concern over the every-day problems of the Association and many of them did not follow major changes in policies Furthermore, the price policies of the Association have been changed frequently to meet changing conditions and it has been difficult for many producers to follow and appraise changes in the bargaining activities. Therefore, it is not surprising that when producers were asked for suggestions or criticisms of the Association sales policy, their answers were mostly indefinite. Nineteen farmers indicated that they thought dealer spreads too wide, seven said the board of directors compromised too easily, six thought that the salary costs were too high and the same number did not like the classified plan of selling. Nevertheless, in their own minds, many producers had some rather intangible measures of the importance of the Association. Some felt that the Association had information on supply and demand which assured producers fair prices; others believed that the classified plan of selling milk had increased their returns; still others stated that the Association had stabilized prices and increased the bargaining power of all producers. Even among the producers who took very little personal interest in their Association there appeared to be a general feeling that it "looked after their interests" and for this reason they felt it was worth while.

MILK PRODUCTION AND SURPLUS CONTROL

THE SURPLUS PROBLEM

Annual Surplus. Three imporant developments in milk supplies stand out during the period of operation of the Association. First, the volume of milk handled by the Association has been relatively constant since 1933. Second, the total production of graded

milk for the market has expanded. Third, the receipts of ungraded milk in Louisville have increased sharply (figure 10).

When the production of milk continues to expand more rapidly than the sale of Class I and Class II milk, as has been the case during the last four years, the accompanying surpluses introduce new bargaining problems. The increased receipts of ungraded milk also represent potential competition that may greatly increase the supplies of market milk whenever producers of this milk can be assured of a continuous outlet at prices which would justify the added cost of meeting the requirements of graded milk. Observation during the summer of 1937 and subsequent developments dur-

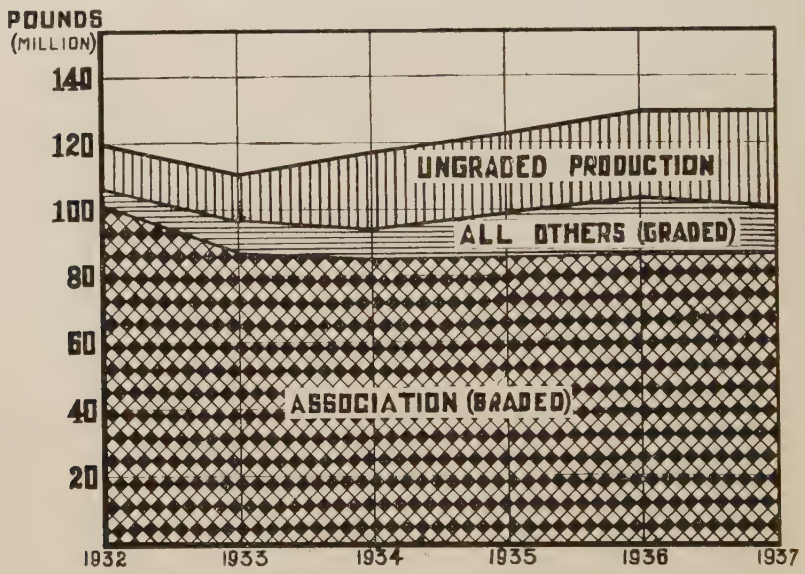

FIGURE 10. Annual receipts of graded and ungraded milk.

ing 1938 indicate a growing interest among this class of producers in qualifying for graded milk production. This is a development of particular interest because of its effect on the future program of the Association.

Seasonal Variation. Milk production and consumption conform to a pattern that appears rather consistent from year to year (figure 11). In each year, from 1932 to 1937, milk receipts of the Asso-

ciation were largest in May. They were smallest in February in four of the six years.[1]

Sales as whole milk in bottles and bulk are much more constant than receipts, altho such variations as exists in sales fortunately tends to conform to the same seasonal pattern as receipts, thus

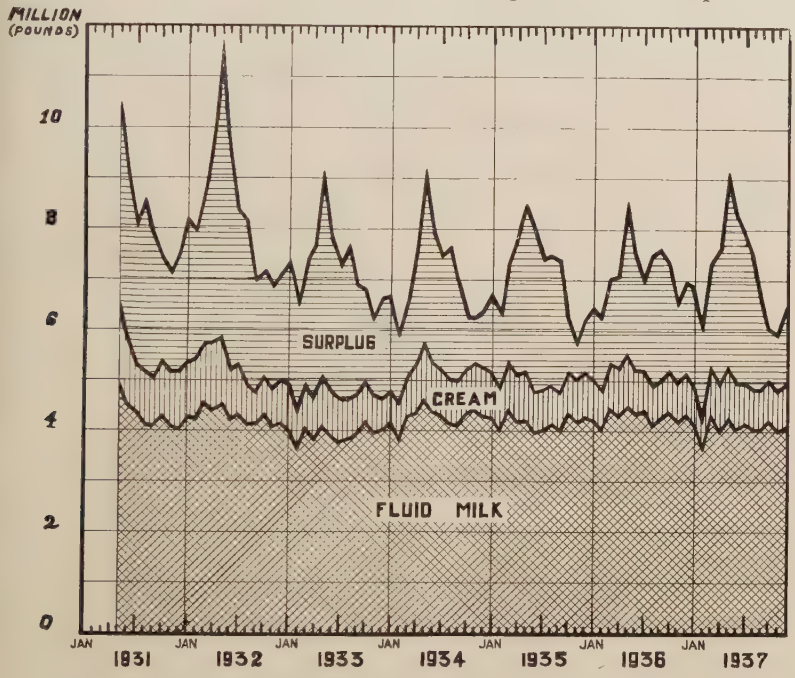

FIGURE 11. Monthly changes in the use of milk sold by the Association.

minimizing to a small degree the size of the surplus of milk. Sales of Class I milk have the most stability from a seasonal point of view and those of Class III milk have the least stability (figure 12). Sales of Class I milk were highest from February to June and in October and November, and lowest in August. The seasonal variation was less than 10 percent. In the case of Class II milk, the variation from the month of highest sales in May to the lowest sales in August was approximately 30 percent.

The day-to-day and week-to-week changes in both receipts and

1 On a daily basis receipts of milk have been smallest in October or November. Demand for milk has been relatively high in these months and on several occasions there were temporary shortages.

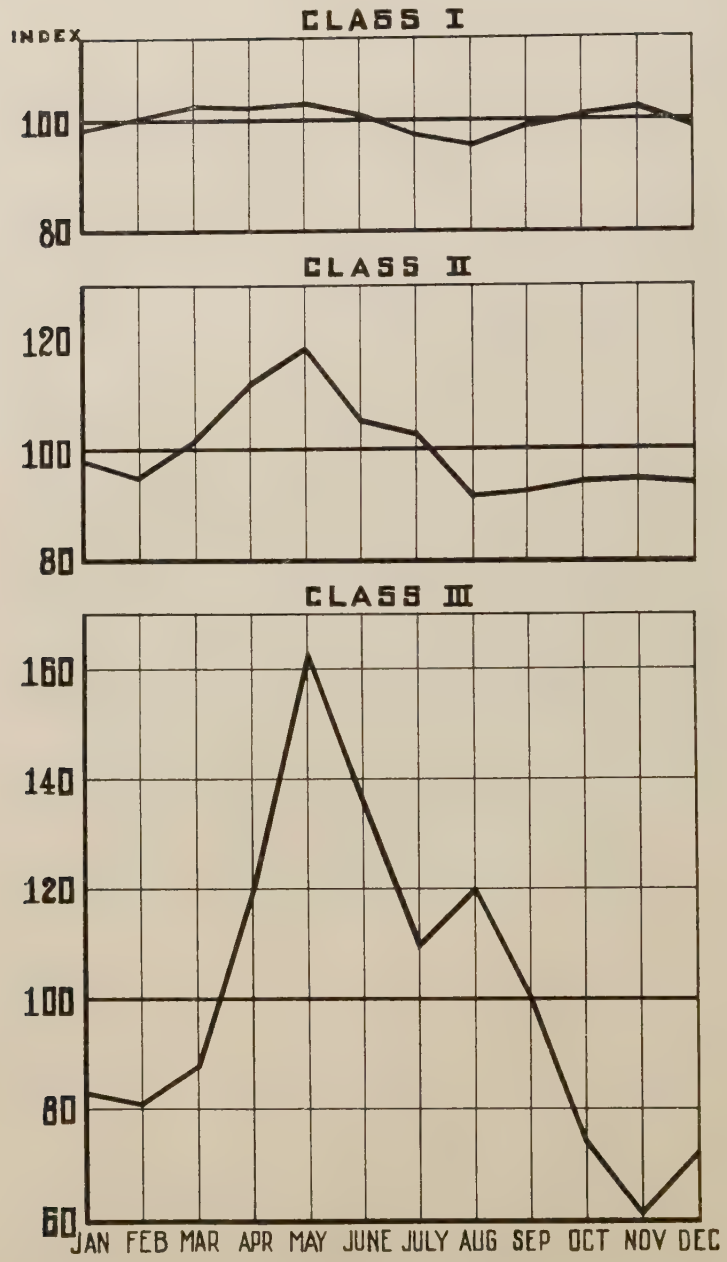

FIGURE 12. Monthly variation in the sale of milk. Data adjusted for a straight-line trend, 1932-37, average equals 100.

sales of milk are highly variable. Neither the Association nor the dealers can forecast with any degree of accuracy the daily supply and demand for milk. Consequently a certain amount of Class III milk is needed to take care of daily and weekly fluctuations in Class I and Class II sales and assure an adequate supply for these uses. Experience of the Association has shown that a reserve of about 18 percent for the month is necessary if all dealers are to be fully supplied at all times (figure 13). This excess is known as

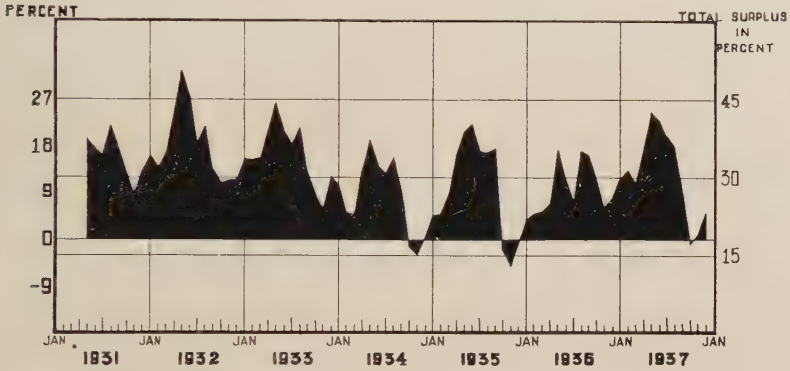

FIGURE 13. Percent of surplus milk above or below an 18% operating reserve.

"operating reserve" and the amount needed varies with the type of dealer, the season of the year and the day of the week. Furthermore, the delivery of milk to the final consumer must be made within 36 hours after the time of pasteurization. Therefore, daily reserves must be high enough to take care of returns where over 65 percent of the market is wholesale and where all milk over 36 hours old is returned to the distributor.

ADJUSTING SUPPLY TO DEMAND

The Base-Surplus Plan. Shortly after the Association began to function, a base-surplus plan was introduced to encourage more uniform production and to discourage the marketing of large surpluses. The plan of operation was announced in October, 1931, and the rules and regulations were released somewhat later.[1] Many

1 See Falls Cities Cooperative Dairyman, May, 1932, Vol. 1, No. 6, for rules and regulations governing the basic surplus plan. Modifications were made in these basic rules from time to time, most of them being restrictive in nature.

producers did not understand the purposes and operation of the plan, and once the program was under way the officials of the Association became so engrossed in details of administration that they did not have time to explain the various aspects of it to farmers. Consequently, subsequent modifications designed to correct apparent inequalities among producers and to adapt the plan to market conditions only contributed to confusion and misunderstandings of the original plan.

An important source of misunderstanding was the large amount of base issued and the failure of the Association to adjust base to the requirement of the market for Class I and Class II milk. When the Association decided to make prices of base milk to producers correspond to Class I and Class II sales it became necessary to prorate the amount of milk which could be paid for at the base price. Consequently producers were paid their proportionate share of what was received from sales of Class I and Class II milk. In most instances, the amount of milk on which they received base payment was less than the base originally allotted them.

Table 8. Percent of base paid for at the base price.

Month	1932	1933	1934	1935
	percent	percent	percent	percent
January	74	75	68	—
February	61	74	70	—
March	98	73	72	—
April	80	70	73	—
May	85	67	73	100
June	80	67	80	100
July	85	65	80	100
August	80	65	80	—
September	85	70	80	—
October	82	72	80	—
November	80	71	—	—
December	77	68	—	—

Another difficulty of the base and surplus plan grew out of the open base policy of the Association.[1] Once bases were announced, many members insisted that they did not have an equitable base and demanded an increase in base. As a result, rather than increase bases arbitrarily, dairymen were given an opportunity to establish

1 Regulations allowed producers to increase base milk.

bases by increasing production during a designated period, by buying base from other producers or by other means recognized by the Association. The consequence of this policy was to increase the amount of milk and further contribute to the difficulties of administering a base that was originally too large. The "open base" policy was then abandoned early in 1933, and a closed base plan was adopted.[1] Thus, the only way by which producers could increase base was to secure some of that already allotted. Out of this policy grew many undesirable practices, mostly associated with keen competition for allotments. This was in turn followed by a series of regulations designed to correct such practices and at the same time restrict production and adjust surplus to the needs of the market.

Many producers, particularly those with low base, became dissatisfied. Others became discouraged in their attempts to improve allotments and withdrew from the Association subsequently seeking other outlets for their milk. This group was augmented by shippers who had lost their base for various reasons and by new producers who could not get a desired share in the market thru the Association. Later a part of the non-association members formed a new cooperative known as the Independent Milk Producers' Association, previously referred to in the bulletin.

Effect on Membership Relations. Almost from the beginning the management was continuously on the defensive in defending the reason and justice of the base-surplus plan, the amount of milk allowed each producer and the method of allocating base. Some members felt that their neighbors had an advantage in original allotments, and that equalizations thru earned base were equally unjust. Much time was spent at local meetings in discussing the problems. Finally, differences of opinion became so marked and adjustments so tedious that the base and surplus plan became a threat to the existence of the organization itself, and payments under this plan were discontinued in November, 1934.

The discontinuance of payment under a base and surplus plan was followed by the return to a pool plan of settlement, which resulted in an improvement in morale. There is a much better producer-association relationship and a more harmonious market thruout.

1 Regulations permitted no increase in base milk.

On the whole, the open-base policy resulted in a rush to increase basic allotments, which increased total production; the closed-base period brought about strained membership relations which threatened to destroy the strength of the Association; and finally the discontinuance of the base-and-surplus plan tended to result in increased seasonal variations in production. Temporary shortages of milk developed during the fall months of 1934, 1935 and 1937. A special campaign to encourage better feeding prevented a similar shortage in the fall of 1936.

The decline in milk production during the fall has caused much concern because any sudden drop in production tended to leave a certain class of distributors without adequate supplies of Class I and Class II milk. Since it is not economical for all dealers to carry adequate operating reserves at all times, the Association has handled individual dealer shortage by shifting milk between dealers or by transfer of shippers. When milk was shifted, a dealer who wanted milk was obliged to drive to some other plant for additional supplies, while transfer of shippers required time and tended to disrupt producer-dealer relationships. Neither method has proved entirely satisfactory either to dealers or producers. A more flexible plan for the equalization of supplies needs to be worked out along with adjustments in production which will protect all distributors from temporary shortage of supplies.

The chances of making adjustments in production by re-introduction of a base-surplus plan appear remote. This is particularly true since it has already been tried and the present attitude of members is definitely unfavorable. Out of the 227 members contacted 124 definitely did not like the plan and only 76 indicated that they favored it. On the other hand, 134 members indicated that they would favor some sort of limitation on supplies. Most suggestions as to how to limit supplies were indefinite. Eighteen members suggested that the base-surplus plan be used again, nine thought that adjustments could be effected by education, and the rest of the proposals were indefinite or arbitrary in nature.

The Association has already tried to encourage more uniform production by the base and surplus plan, by dissemination of information on consumption, supplies, prices and the like, cooperative purchasing of feed, and financial assistance to members who

would undertake to improve practices thru herd improvement associations. These attempts were partially successful but did not show consistent results. Therefore, it is likely that seasonal periods of surplus and shortage may continue indefinitely unless the membership itself takes over more responsibility for control of production.

HAULING MILK

One of the first problems undertaken by the Association was to reorganize the existing system of transporting milk. Dairy farmers were in need of lower hauling costs, more uniform rate schedules and better service. Careful planning, better equipment and larger loads were essential to eliminate duplication of service and high hauling charges. With these objectives in mind a transportation committee was appointed to work with local groups of members in selecting truckmen and planning truck routes.

Since nearly all milk in the Louisville market was hauled in privately owned trucks, the chief difficulties this committee encountered were to compromise conflicting interests and satisfy individual producers who preferred to patronize certain truckmen or certain dealers. In the end these matters were left largely to individual truckmen and their patrons, with the result that there is still considerable overlapping of truck routes and an excessive number of deliveries. Nevertheless, in less than two years after the trucking committee began to function, the number of trucks hauling graded milk had been reduced from 112 to 69. Part of this reduction was due to voluntary retirement and abandonment of unprofitable routes and part to consolidation and outright purchase of routes.

A law which required all contract and common carriers to pay a mileage tax was enacted by the Kentucky Assembly in 1932. Exemptions were provided for trucks owned or operated by cooperative associations. Subsequently all trucks hauling milk for Association members were placed under a lease contract. In signing a lease truckmen were guaranteed payment for hauling under a continuous contract and at the same time exempted from the state mileage tax. In turn truckmen were required to use insulated trucks, carry liability and cargo insurance and in other ways guarantee effective service and efficient delivery. The lease further provided that the hauling rate, the point of collection and amount of individual ser-

vice should be determined by agreement between a truckman and an individual producer, altho the Association reserved the right to approve such agreements and establish maximum and minimum rates based on hauling distance, type of road, size of individual shipment and total load. Thus, the Association has maintained control over hauling and rate structures.

Because of the differences in hauling conditions the relationships between distance and rate (shown in table 9) are somewhat

Table 9. Miles from market and hauling rates for members.

Distance in miles	Rate per 100 pounds						
	10-15c	16-20c	21-25c	26-30c	31-35c	36-40c	Total
0- 9	3	6	7	1	-	-	17
10-14	-	11	8	-	-	-	19
15-19	-	16	13	1	-	-	30
20-24	1	14	10	-	-	-	25
25-29	1	20	18	2	-	-	41
30-34	-	11	11	7	-	-	29
35-39	-	6	14	12	-	4	36
40 or more	-	2	10	10	1	4	27
Total	5	86	91	33	1	8	224

variable. The range of rates for 224 producers visited in the fall of 1937 was from 11 to 37 cents and the hauling distance from 4 to 55 miles. Most of the differences in hauling charges were associated with the location of the farm, the type of highway and the service rendered. Nevertheless, not all producers are entirely satisfied with the present hauling system. For example, 70 producers made 86 suggestions for improvement. Twenty-six suggested that changes were needed in trucking equipment, 21 thought the haulers should give better service, 17 favored more efficient routings, and 15 wanted different rate structures. On the other hand, 134 of the 227 producers interviewed were satisfied with the present system.

Unquestionably the Association has done much to reduce hauling rates and improve the hauling service thru improved routing and larger loads. Yet there are delays and unnecessary stops both in the country and at city plants. Further improvements depend upon the complete cooperation of Association members and the submerging of individual interests to that of the group on such adjustments.

SERVICE ACTIVITIES

Butterfat Testing. Considerable variation between some distributor's tests and those of the Association were discovered when the Association began to make butterfat tests in May, 1931. In instances of wide variations the distributors were asked to pay members on the basis of Association tests, but they did so only under great protest. Persistent differences led the Association to make a study of sampling and testing methods. The differences in methods and points of view with respect to testing were finally composed by establishing uniform rules and regulations for sampling and testing milk by the licensing divisions of Kentucky and Indiana. Originally each producer's milk was sampled and tested by the Association about once every three months, but this method was changed in 1936 so that every producer's milk is sampled each month.

Some dealers have objected to adjustments in tests based on occasional samples as compared with daily composites taken by the dealer, but for the most part tests have checked so closely that differences were easily compromised. On the other hand, the majority of producers were pleased with the results obtained from Association tests. One hundred and seventy-two out of 227 members expressed approval of the system of checking tests. Ninety-three of them said their tests had been more satisfactory since the Association began to test, but 20 members said that some changes were needed in the system. Their criticisms were largely directed at the obvious difficulty of basing adjustments on the small number of samples obtainable with the present system. This problem has also concerned the management for some time and, because more frequent samplings would require a larger personnel and increased cost, the Association has made a special effort to keep a close check on individual producers and dealers wherever the routine tests were not entirely satisfactory. In this way they have rendered maximum service at minimum cost.

Request Services. The Association renders on request numerous services requiring laboratory facilities. Among these are special butterfat tests, bacteria counts, checking of weights, off flavor and temperature, and, more recently, tests for mastitis. A summary of the number and scope of these tests is given in table 10.

The total number of requests for service, particularly those for

butterfat tests, has declined since accurate records were kept, beginning in 1933. Most requests come during the summer, when butterfat content declines and temperature rises. Some requests require immediate individual attention, while others are less urgent. All tests are made by employees of the Association who have other routine duties. In order to avoid excessive travel expense some requests have been delayed until others could be given attention on the same trip. Such delays have led to some criticism from members who felt the Association did not adequately look after their interests.

Table 10. Special requests by Association members.

Year	Number of members requesting	Nature of requests					
		Butterfat test	Bacteria	Weights	Temperature	Mastitis	Other
1933	304	242	46	32	3	0	1
1934	285	198	82	12	5	0	3
1935	247	161	55	32	2	10	8
1936	222	159	42	15	5	12	8
1937	130	79	32	8	2	15	0

Other services. In March, 1933, the Association began the manufacture and sale of a chlorine disinfectant. Later, fly spray was added and the disinfectant department was expanded until it now occupies an important place in the service program. Cooperative purchasing of supplies and feeds was sponsored from the beginning. In some instances, as in the case of milk cans, the Association purchased equipment outright and paid a nominal charge to merchants who stored and distributed them; in others the organization made arrangement with local suppliers to handle approved equipment for members. Likewise, other supplies were obtained thru cooperative buying. For several years the Association arranged for special prices on feeds and during the drouth of 1936 it contracted for more than $100,000 worth of feed at what proved to be an average saving of about 20 percent.

The Association has audited reports of dealers on use of milk, guaranteed losses from bad accounts, generally supervised hauling and rendered other service to members. The extent to which the Association renders service is suggested by the fact that 198 out of the 227 members interviewed named one or more services they had received. Of the 562 services named by this group 248 were labora-

tory services, 140 were services associated with selling and payment for milk, 123 related to cooperative purchases and 51 were miscellaneous in nature. A most valuable service was rendered by the Association at the time of the disastrous flood in January, 1937. At that time the Association cooperated with the Market Administration in the movement of milk, paid haulers and secured payment for all milk handled. Likewise, the Association has stood ready to lend aid to any cause which it believed would promote the interests of producers or help to stabilize and strengthen the market.

COST OF OPERATION

Financing the Association. The organization has been adequately and soundly financed since it began actual operation in March, 1931. Beginning in May of that year, distributors paid to the Association a check-off fee of 5 cents per hundred pounds on all milk received from Association members. Income from this source proved adequate for operating expenses and at the end of the first nine months nearly all the deficit of $7,300 incurred in starting the Association was paid. At the close of the following fiscal year ending January 31, 1933, the Association had paid all its indebtedness and had a net worth in excess of $12,000. In October, 1934, the check-off to the Association was reduced from five to four cents.

Altho the Association is authorized to do so, it never made special deductions for a reserve; instead, the savings from operating funds were set aside as a reserve. This procedure seems to have met with the approval of the membership and nearly 85 percent of those interviewed favored maintaining a permanent reserve fund. Many of them frankly said they did not know how large the reserve should be but that it should be sufficient to keep the Association financially sound in the face of any emergency. When questioned more closely as to how they thought the reserve fund should be used, the producers said that it was needed (1) to guarantee milk checks, (2) to pay legal costs, (3) in cooperative purchasing, (4) to maintain credit rating and (5) to build a surplus plant if necessary. The majority of the Association members apparently realize the soundness of reserves and the uses to which they may be put. Very few were willing to place limitations on its use, and thus expressed their confidence in the expenditure of Association funds by the board of directors.

Operating Expenses. During the period studied the Association sold an average of nearly two million dollars worth of dairy products each year, and spent in carrying out its price bargaining and membership service about $32,000 annually. These costs have been classified under five major heads for presentation in this study: (1) administrative, (2) service, (3) membership solicitation, (4) Dairy Council for educational purposes and (5) miscellaneous.

Table 11. Analysis of the operating expenses of the Association. Dollars.

	1931	1932	1933	1934	1935	1936	19
Administrative costs							
General	9,425	9,671	9,962	6,197	8,482	8,547	8,5
Directors and mileage	2,653	3,386	2,774	4,230	3,078	2,940	2,4
Service activities							
Laboratory salaries	—	3,720	4,830	7,149	6,338	7,384	7,3
Laboratory expense	—	418	445	763	507	592	
Travel	1,583	1,822	3,763	2,526	2,580	3,456	3,9
House organ	—	466	356	395	741	703	
Miscellaneous costs							
Direct membership solicitation	418	582	352	32	128	760	
Dairy Council and educational promotion	4,935	5,800	3,796	5,085	1,963	—	
All other costs	4,553	8,364	7,009	5,425	8,091	9,231	7,9
Total expenses	23,567	34,229	33,287	31,802	31,908	33,613	31,3
Net worth	2,848	12,206	19,841	24,007	24,533	26,151	32,1

No significant changes were made in the total cost of operating the Association from year to year. However, an analysis of the individual items which go to make up total expenses shows (1) an increase in the cost of service activities, (2) a decline in Dairy Council costs and (3) considerable variation in administrative costs. In the first instance, a rapid expansion of service activities has necessitated increased personnel and larger travel allowances. In the second instance, most of the cost of the Dairy Council, previously paid by the Association was handled thru the office of the Market Administrator and the resultant savings to the Association were used to increase membership service. On the other hand, two factors have influenced the administrative costs. First, in 1934 the Association was without a manager for a period and the operating committee of the Board acted in that capacity; thus the saving in the mana-

ger's salary was offset by increased costs of the Board. Second, since 1935 the manager has devoted part of his time to duties as Market Administrator and, by agreement, the Association was relieved of the obligation of part of his salary, thus reducing the administrative salaries. During the period, 1932 to 1937, 26.5 percent of the total cost of operating the Association was paid for general office salaries, 9.7 percent for directors per diem and mileage, 19 percent for laboratory salaries, 10.7 percent for laboratory travel and expenses, 1.7 percent for the paper, 1.4 percent for membership solicitation, 8.6 percent for Dairy Council, and 22.3 percent for all other expenses. In actual money the services of the Association has cost producers, on the average less than two percent of the value of their product, or about $1.90, for each $100 worth of milk sold thru the Association. This cost was divided as follows: management 50.5 cents, directors and mileage 18.5 cents, laboratory salaries 36.2 cents, laboratory expense 3.1 cents, travel 17.3 cents, cooperative dairymen 3.3 cents, membership solicitation 2.6 cents, Dairy Council 16.4 cents, and all other expenses 42.5 cents. On the basis of individual years the expense has been inverse to the value of products. The cost in 1937 was $1.55 per $100 value and $2.41 in 1933.

MEMBERSHIP RELATIONS

Control of the Association. The ultimate success of a cooperative association depends upon the loyalty and support of its membership. This in turn requires an appreciation and understanding of the problems in management, and an active interest on the part of members. The policies of the Association are formulated by the board of directors and executed by the employees, but the control of these policies is largely in the hands of the membership because the men selected to represent the producers are responsible only to the members. In the Louisville market, producers in each of the fourteen divisions of the milkshed elect a director who serves for three years. The terms of the directors are arranged so that a majority of the Board is experienced and familiar with the marketing problems at all times. The entire board of directors selects its own officers and formulates all policies of major importance, while lesser problems are referred to an executive committee of five members. The employees of the Association consist of manager, secretary-treasurer, two bookkeepers and five laboratory workers.

The milkshed is further divided into 21 locals which serve primarily as units for conducting educational meetings. Here the officers of the Association meet to discuss plans and policies with the members. The local meetings are in charge of local officers selected by producers. These officers not only conduct the local meetings but act as advisers to the board of directors and from time to time meet with directors to discuss management problems.

Leadership in the Association has been confined largely to officers of the organization who, after taking cognizance of the local attitudes, formulate the working program. The policy of the directors has been to formulate and execute whatever policies would expedite the purpose of the organization and meet the approval of the majority of the membership. In a number of instances major changes in policy have been made before the membership generally was informed as to the proposed changes. Such a program of dispatch proved effective in bargaining, but fostered a membership dependent upon the central office, permitted the growth of misunderstandings and failed to develop strong community support.

About 40 percent of producers interviewed said they had no voice in directing the affairs of their association. While most of them said the management was not at fault, this attitude of indifference shows the need of greater sense of responsibility among members and emphasizes the importance of a more aggressive membership program.

Maintaining Membership. On March 1, 1931, the Association had 2,670 members, about a third of whom were shippers of cream. At the end of 1931 there were 1,629 members actually selling market milk and by December, 1932, the number had dropped to 1,158. Two factors are largely responsible for this change and for the fact that the Association actually served less than half of the original members. First, the Association did not emphasize bargaining for sour cream and finally did no bargaining at all; second, the enforcement of the Louisville milk ordinance caused the discontinuance of more than a third of those members who originally sold milk thru the Association. For a time these members received limited benefits in the sale of ungraded milk but this service was finally discontinued.

The active membership has been relatively constant since 1933

(table 12). It is also significant that of the 1,011 active shippers on record June, 1937, 889 had shipped continuously since they joined the Association. Of these, 633 joined prior to December, 1931, and 256 since then. Analysis of the names of the remaining shippers showed that 100 had quit shipping milk to Louisville once, 14 twice, 7 three times, and 1 member had been in and out 4 times. This study

Table 12. Membership of the Association.

Close of year	New producers	Renewals	Inactive	Discontinued	Total active
1931	1,766	0	14	123	1,629
1932	246	70	85	702	1,158
1933	16	28	35	82	1,085
1934	47	31	37	85	1,041
1935	48	58	45	95	1,007
1936	90	41	38	105	995
1937	64	30	43	48	998
1938[1]	105	19	52	2	1,068
	2,382	277	349	1,242	

1 Record of July 1, 1938.

of records shows rather definitely that milk production is not an in-and-out business and that most dairymen either abandoned the production of graded milk or gave the dairy enterprise more attention. Thus, a constancy of dairying has been a factor in maintaining satisfactory relationships with distributing agencies. Of 1,008 members whose records were tabulated, 556 producers had never changed distributors to whom they shipped milk, 244 had changed only once, 118 twice, 66 three times, 21 four times, and 14 five times or more. One changed dealers 11 times. The fact that many producers continue to ship to the same distributor year after year indicates a rather wholesome producer-distributor relationship.

In spite of the fact that producers have been encouraged to withdraw from the Association as a result of dealers buying at a flat price, there has been no serious loss of membership. Nevertheless, an improved contract with producers was drawn up and the entire membership signed new contracts in the fall of 1936 and in 1937.

Educational Work Among Members. The Association has depended upon four principal avenues of communication in maintaining its membership relations. First, an association paper, "The Falls Cities Cooperative Dairyman," which is sent monthly to all its

members; second, local and community meetings; third, Advisory Council meeting; and fourth, direct contact of officers and employees of the Association.

Perhaps the monthly paper gives the widest contact and constitutes the chief source of information to many members. Indications are that it is widely read and well received. For example, 94 percent of the members visited reported that they received and read the paper. While no attempt was made to measure the effectiveness of the publication, its importance as an active and potential educational force cannot be overlooked. Membership attitudes toward the paper were decidedly favorable and highly complimentary.

On the other hand, formal meetings were less effective. Producers interviewed said that local meetings had been few and often poorly attended. Sixty-five of the 227 members had attended at least one local meeting the preceding year and 55 had attended two or more, the remaining 107 had attended none at all. About a fourth of the members had attended the last annual meeting of the Association.

Those who had attended various meetings reported that they created a better feeling among producers and a closer relationship between the officers of the Association and its membership. One hundred twenty-four members felt that local meetings were definitely worthwhile, since they offered an opportunity for all members to learn about Association plans, gave members a voice in the management and built up interest in the organization. On the other hand, local meetings have reached only a small number of the most interested producers and a general lack of interest and poor attendance has been discouraging to the management.

Some effort was made to build up local support and encourage a greater degree of membership participation in Association affairs, but there are numerous economic and social differences within the milkshed which may limit the growth of spontaneous, unified interest in local meetings. It is doubtful whether many producers in certain parts of the milkshed would take an interest in community meetings except when some important issue affecting producers is at stake. Under these conditions the Association has given very little attention to the building of locals and has devoted more time to local leadership. Since 1935, an advisory council consisting of the

officers of the locals, has held quarterly meetings at which the officers and management of the Association have discussed plans and problems and asked for the suggestions of the local representatives. This group is the nucleus of community leadership from which information will be carried back to the membership. More direct contacts have been made by the officers and directors of the Association and by employees engaged in field and service activities. Field contacts have been occasional and expensive and for the most part they have been concerned with definite problems, membership solicitation or request services. Such contacts provide limited opportunities for educational work but they should be utilized more fully. In several instances new members expressed disappointment because the Association failed to render assistance or display any interest in the members' problems. While it is not always possible to personally visit all the membership it is rather important that new members receive special attention so that they may be fully aware of the benefits of the Association.

General Appraisal of the Association. Since there is no tangible, quantitative measure of the success or failure of the Association, producers were asked to express their opinions on questions affecting the successful operation of the organization. Among other things members were asked why they had joined the Association. Two hundred and twenty-five members answered the question. An analysis of these answers showed four principal reasons: (1) to improve prices; (2) to improve market conditions; (3) faith in cooperation; and (4) influence of friends, neighbors and landlords. In view of the reasons given for joining the Association it is interesting to note the replies to certain other questions. One hundred and ninety members said that the Association had given farmers a voice in establishing milk prices, 20 said it had not, and 17 were undecided. When asked whether the Association had been responsible for improved market conditions 169 answered yes, 12 no, and 46 were undecided. One hundred and thirty-four said that the Association had secured a larger share of the consumers' dollar for the farmer, while 41 said no, and 52 were undecided. When asked whether their membership had given them a voice in determining policies, 134 members said yes, and 93 said they had little or no influence. On the basis of these replies it appears that the majority of producers

believed that the Association had accomplished most of the things expected of it.

On the other hand, when asked if the Association had failed in any way, 73 said yes, 150 no, and four were undecided. Most of those who said the Association had failed qualified their answers. Among the reasons given were: (1) failure to get what milk was worth; (2) checking tests was ineffective; (3) bases were unsatisfactory; (4) dealer spread was too wide; and (5) the Association could not control all the milk. Some of the criticisms were undoubtedly well founded but in many instances producers did not have sufficient knowledge to evaluate the operations of the Association properly.

At the time the field studies were made the majority of producers had a very high regard for the work of the Association. When asked whether they felt the organization had been worth while, 208 members said yes, 14 no, and six were undecided. When the replies were analyzed 386 reasons had been given, 148 of them related to better prices, 102 to service activities, 77 to improved marketing conditions and 59 to other values received from cooperative efforts.

This study indicates that while members have a high regard for the Association, many do not understand the problems with which it must deal, especially those of price bargaining; therefore, one of the major problems facing the Association is to bring about a better understanding of the factors affecting prices and how these, in turn, affect the producer, consumer and distributor. This is necessary in order that members may understand the fundamentals of cooperation and the limitations of price bargaining. The need for a better informed membership will become increasingly important at times when conditions are not so favorable as in the period covered by this study.

SUMMARY

Since its beginning in 1931 the Falls Cities Cooperative Milk Producers' Association has been a constructive force in the Louisville milk market. It has developed a comprehensive marketing program and has adapted itself to Federal and State control programs. Among the things which required flexibility in the Association policy were: (1) differences in economic and competitive conditions in various sections of the market; (2) rapid changes in price

levels since 1930; (3) adjustments resulting from the revision of the Louisville milk ordinance in 1931; (4) new problems resulting from the organization of a second association in 1933, and (5) the coordination of Federal and State control programs in 1934 and 1936, respectively.

The type of program followed by the association has been that of price bargaining but at the same time it has steadily developed its service and laboratory facilities. In carrying out its objectives the association has faced many of the problems common to all collective bargaining organizations. Nevertheless, the Directors have adhered closely to policies designed to provide equitable treatment and increased incomes to its membership.

As a sales agency for producers the Association has controlled in excess of 80 percent of the graded milk for the market.[1] It has operated under a full supply contract with all its members and with most of the dealers buying from it. Under these conditions the Association has set out to: (1) help increase the consumption of milk thru cooperating with the dealers in educational work and advertising; (2) ameliorate difficult competitive problems; (3) adjust annual and seasonal supplies to the needs of the market; and (4) secure the best price obtainable in the light of market conditions.

In some cases the influence of the Association has been obscured by other factors but, on the whole, its efforts appear to have been constructive. For example, an analysis of available records shows that, in spite of higher prices, the per capita consumption of milk in the Louisville market has increased slightly. This increase may have been due to various things but on the constructive side was the promotional work done jointly by the Association and its dealers and the quality improvements sponsored by the milk division of the Louisville Board of Health. Likewise, on numerous occasions, the Association has contributed to price stability thru its price policy and thru its cooperation with Federal and State programs in securing more uniform resale prices. The Association has also contributed to increased market efficiency by: (1) pricing milk according to its uses and encouraging better utilization of surplus; (2) securing more uniform testing and sampling methods; (3) assuring adequate supplies to the dealers buying from it, and (4) low-

1 Graded milk is that milk which is approved for bottling by the Kentucky and Indiana health authorities.

er hauling cost resulting from the reorganization of the transportation system.

All the above named factors have worked jointly or separately so that when consumer buying power improved, the net effect of these activities was higher price to producers and lower spreads taken by distributors. For example, it can be shown that the rise in prices paid to producers in the Louisville milkshed has been greater than for the average of the United States during the period from 1932 to 1937. An analysis of available records of representative distributors shows that during the same period their spreads were reduced over 13 percent. Undoubtedly, many factors contributed to these changes, but it is doubtful whether many of the changes could have been accomplished without the concerted effort of organized producers.

It was the consensus of distributors that the Association had been largely responsible for a more stable market, more harmonious relationship between dealers, more uniform buying plans and a better satisfied group of producers. On the other hand, comments of individual dealers with regard to the activities of the Association indicated that some felt that all dealers had not shared equally in the advantages of collective bargaining. For example, some dealers expressed the feeling that the classified plan had worked a hardship on dealers having a large bottled-milk trade, since they competed most directly with dealers who purchase milk from outside the Association at lower average prices. Others felt that the Association had forced prices too high and that the assistance given dealers in meeting price competition was unjustified even tho it was intended to stabilize prices and prevent price wars. Still others were critical of the Association's sales policies and felt that it was arbitrary and unsympathetic toward dealer's problems. Furthermore, some dealers felt that the whole pricing system was faulty, and argued that the conferences required altogther too much time, permitted personal differences to influence judgments, caused unnecessary changes in the classification of milk and in other ways made it difficult to establish adequate price plans. Nevertheless, the Association and the dealers have worked out most of their differences in conferences, and both parties realize the need of mutual understanding of the economic forces affecting the milk marketing industry.

Since there are no tangible, quantitative measures of the success or failure of the Association, producers were asked to express their opinions on questions affecting the successful operation of their organization. An analysis of the replies of members showed that the majority of producers had a high regard for their association at the time this study was made. Ninety-one percent felt the Association was definitely worth while, and when their replies had been analyzed, 386 reasons had been given, 148 of them related to better prices, 102 to services rendered, 77 to improved marketing conditions and 59 to other values received from cooperative effort.

This study indicates that while members have a high regard for the Association, many do not understand the problems with which it must deal, especially those of price bargaining; therefore, one of the major problems facing the association is to bring about a better understanding of the factors affecting prices and how these, in turn, affect the producer, consumer and distributor. This is necessary in order that members understand the fundamentals of cooperation and the limitations of price bargaining. The need for a better informed membership will become increasingly important at times when conditions are not so favorable as in the period covered by this study.